

Environmental Science or General Biology

EARLY SECONDARY SUCCESSION AT THE 1980 EMERALD LAKE FIRE SITE IN WHITE RIVER NATIONAL FOREST, EAGLE COUNTY, COLORADO. J. E.

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This study was begun in 1980 at a site within the boundary of the Emerald Lake Fire in White River National Forest northwest of Burns in Eagle County, Colorado. The fire site at 3075 m in elevation was first visited less than two months after the burn. Plot samples (100m², 10m², and 1m²) were taken along an east to west transect on a slight ridge within the study site during eight visits over a twenty-four year period. Importance values based on relative frequency, relative density and relative coverage were calculated for trees >4m in height in the 100m² plots and for saplings <4m in height in the 10m² plots. Species composition and relative percentage of ground cover were estimated for the 1m² samples. Notes on vertebrate sightings in the area were also made. Prior to the burn this site had been logged. Lodgepole Pine (*Pinus contorta*) was the previous stand dominant, however, encroachment of Engelmann Spruce (*Picea engelmannii*) and Subalpine Fir (*Abies lasiocarpa*) from a neighboring shallow drainage riparian zone was noted. Widely scattered patches of young Quaking Aspen (*Populus tremuloides*) were present. Nearly all of the standing deadwood had fallen or was salvaged within ten years after the fire. New growth was almost exclusively the clonal Quaking Aspen. The growth rate of these trees and of ground cover restoration are presented. Results from this study are compared with recovery in other fire disturbances. These data are useful for predicting forest recovery sites of similar locations in north central Colorado and in the development of management strategies for the forest.